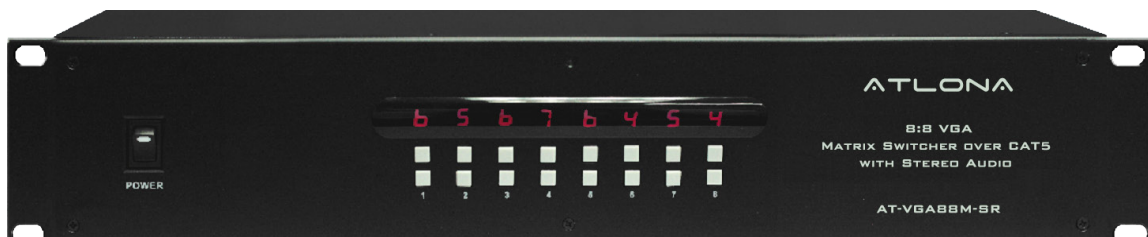




**ATLONA**  
**8x8 VGA MATRIX SWITCHER OVER CAT5**  
**WITH STEREO AUDIO**

**AT-VGA88M-SR**

**USER MANUAL**



## TABLE OF CONTENTS

1. Introduction	1
2. Package Contents	1
3. Features	1
4. Specification	2
5. Panel Descriptions	3
5.1 Front Panel	3
5.2 Rear Panel	3
6. Remote Control	5
7. RS-232 Protocol Commands	6
7.1. Power Off Mode	6
7.2. Front Panel Lock	7
7.3. Unit Reset	7
8. Connection Diagram	8
9. Safety Information	9
10. Warranty	10
11. Atlona Product Registration	11

## INTRODUCTION

Atlona Technologies' AT-VGA88M-SR is one of the most innovative VGA Matrix Switchers with Stereo Audio on the market. The AT-VGA88M-SR has 8 individual VGA (RGBHV) inputs with Stereo Audio and 8 individual CAT5 outputs. Because it is a matrix switch, any input can rout to any output; and the same input can rout to all outputs or any other combination. This unit is ideal for connecting sources including: (computer, Set Top Boxes, and Satellite Receivers, etc.) to desired displays over CAT 5 cable such as: (HDTV, LCDs, Plasma Monitors, Video Projectors, etc.) Selection of inputs can be achieved manually through the Front Panel, through Infrared Remote Control, or RS232 control. 8 receiver units are included to send the VGA signals long distances (up to 1000ft) over CAT5 cable from the transmitter to receiver units.

## PACKAGE CONTENTS:

- AT-VGA88M-SR unit
- Operating Instructions
- IR Remote Controller
- 19 inch Ear mount pair
- RS232 DRV package
- 8 sets of (CAT5 Receiver unit)
- Power Supply 12VDC, Universal Type 50/60Hz, 100~230 VAC

## FEATURES:

- Supports 8 x inputs VGA and Stereo Audio to 8 x CAT5 outputs Matrix Switcher
- Input signals support via VGA (RGBHV), Stereo Audio(AR/AL)
- Output Signals: supported via CAT5-CAT6 cable to VGA Monitor displays
- Higher Video Bandwidth: 325MB each path for RGB signals.
- Supported HDTV Resolutions 480p/720p/1080i/1080p
- Supported HD high definition resolutions: XGA, SXGA, UXGA, WSXGA, WUXGA
- Supported PC Resolution: VGA(640 X 480)/SVGA (800 X 600)/XGA(1024 X768)/SXGA(1280 X 1042)/UXGA(1600 X1200) / 1920x1200 (WUXGA)
- RS232 Serial interface
- Compatible with all VGA Video Monitor devices, Plasma display and Projectors
- Supported RS232 serial interface protocol commands list
- Control PC RS232 Drive compatible with win-95/98/2000/xp
- Interface controls:
  - Attached Window based control software for Desktop or NB control by RS232
  - Manual controlled by Front Panel button
  - IR remote control
- Support desktop with Ear mount and 19 inch Rack
- Power supply 12Volt DC, Universal Type Switch 100~230VAC, 50/60Hz
- Receiver Units extend distances up to 150m (1000ft)
- Receiver Unit Input: 1 x CAT5(RX) Output: 1 x VGA+Stereo Audio

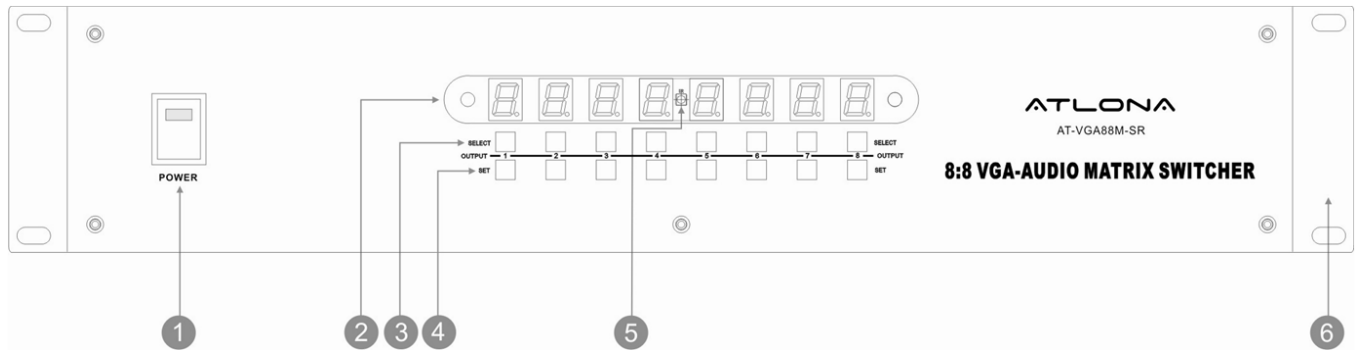
## SPECIFICATIONS:

Type of Switcher	8 inputs to 8 outputs, VGA (RGBHV) with Stereo Audio Matrix Switcher
Input ports	VGA (RGBHV) via 1x HD-15p VGA Female connector
Output Ports	Stereo Audio (AR/AL), Via 1x O3.5mm Female Jack
CAT5	VGA (RGBHV) & Audio Via 1x RJ45 CAT5 connector
Video Bandwidth	325MHz (-3db), 200mVp-p
Video Supported	High resolution formats HD 1920x1200 (WUXGA)
Audio Supported	Stereo Audio
Low all hostile crosstalk	-83 db@5MHz
Controls	IR remote, select buttons on the front panel & RS232
PC Rs232 Control	RS232 interface serial via DRV on a PC
Gain control	60MHz 0.1 db gain flatness
Chassis Material	Metal thin=1mm
Safety Approvals	CE, FCC, RoHS(2002/95/EC)
Dimensions (LWH)	19"x 7.87" x 3.46"(482mm x 200mm x 88mm)
Power Supply	DC12V / 2A (consumption 1.6A Max) Use Universal Switch Type 50/60Hz,100~230 VAC
Shipping Weight	3.95 Kgs / 6.58 lb

## Receiver Unit Specifications

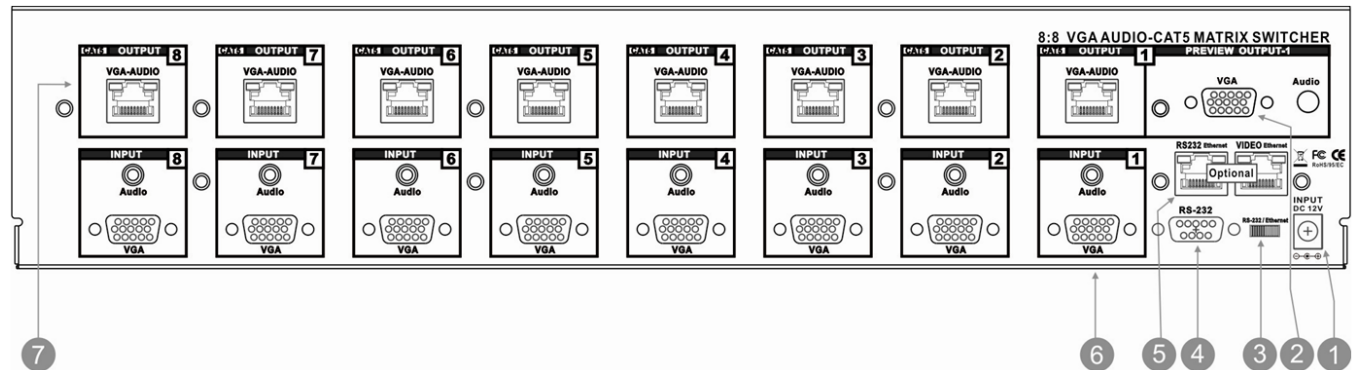
Type of CAT5	Receiver(RX)
Type of Signal	VGA(RGBHV) & Stereo Audio(AR/AL) connectors
Video Bandwidth	225Mhz,-3Db large signal bandwidth 450Mhz, - 3Db small signal bandwidth
Output balance error	-60Db @50Mhz
High isolation	between Amplifier 80Db@10Mhz
Audio-in impedance	10 Ohms
Audio Frequency response	20 HZ to 20KHz,+/-1db
Safety Approval	CE,FCC,VCCI & RoHs(2002/95/EC)
Dimension	2.76" x 2.6" x 1.15" (70mm x 66mm x 29.1mm)
Power Supply	DC12V/0.42A

## 1. Front Panel



1. POWER SWITCH. The power switch turns the unit ON or OFF. The LED will illuminate red to indicate that the switcher is ON
2. OUTPUT STATUS LED DISPLAY. Output channels 1 to 8 will show when LEDs illuminate red to indicate that a video source is present on desired input.
3. INPUT SOURCES SELECT BUTTONS. Output 1 - 8 source select buttons are provided for VGA and Audio channels 1- 8
4. SOURCES SETUP BUTTONS. Press to setup the input channels 1-8
5. IR SENSOR. The IR sensor will receive IR commands from the supplied remote controller.
6. 19 INCH EAR MOUNT PAIR. 19 inch 2U(2D) high case Ear Mount pair

## 2. Rear Panel



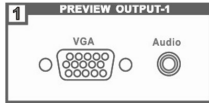
### 1.DC POWER INPUT.

Power Jack:

- DC Jack - inner OD Ø 2.1mm ( + )
- Outside OD Ø 5.5mm (GND)
- Power input - 12VDC, 3A

Switcher use universal power supplier. The switcher is fitted with a DC power plug-park input connector. Please ensure that the plug-park used is of an approved type and is of sufficient current carrying capacity with the correct voltage and connector polarity. 12Volt DC power supply 3A Max.

## 2. OUTPUT -1 PREVIEW.



VGA (RGBHV) Via 1x HD-15p connectors

Support Preview Output VGA / Audio sources as same signal as the output-1. Stereo Audio(AR/AL) Via 1x O3.5mm ear phone jack connector.

*Note: With 2x female connectors.*

## 3. RS232 and 232 Ethernet Switch. Control RS232 via Ethernet from a PC.

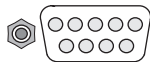
RS-232/Ethernet



Switch the RS232 and Ethernet. Control via Ethernet.

*Note: with 1 x 6 pins slide switch*

## 4. RS232 Connection.

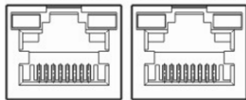


DB-9pin Female connector

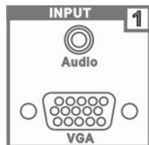
RS 232 control port to allow for interfacing to a PC, Such as a computer or touch panel control, to the switcher via this DB-9pin Female connector for serial RS-232 control.

## 5. RS 232 Over Ethernet. Connect RS232 serial interface via Ethernet control

RS232 Ethernet VIDEO Ethernet



## 6. INPUTS 1-8 VGA-RGBHV-AUDIO.



VGA (RGBHV) Via 1x HD-15p connector

Stereo Audio(AR/AL) Via 1x O3.5mm ear phone jack connector

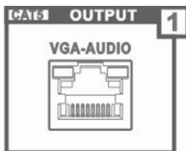
*Note: With 2x female connector (RGBHV) / Stereo Audio*

Connect 1-8 sources of VGA(RGBHV)Stereo Audio devises to 8x CAT5 outputs of the matrix switcher.

Input 1~8 port source signals :

- VGA (RGBHV), 1x HD-15p Connectors
- Stereo Audio(AR/AL), 1x O3.5mm ear phone jack

## 7.OUTPUTS1-8 CAT5 (VGA+AUDIO).



Connect a signal of VGA (RGBHV) via CAT5 Category cable to VGA Monitor displays and Audio speaker devices.

Output 1~8 CAT5 port signals :

- CAT5 VGA (RGBHV) + Audio

*Note: With 1x CAT5 RJ45 connector.*

### HOW TO SETUP IR CODES :

POWER ON : 00FF 04FB

POWER OFF : 00FF 05FA

INPUT#1 / OUTPUT#1 : 01FE 31CE  
INPUT#1 / OUTPUT#2 : 01FE 32CD  
INPUT#1 / OUTPUT#3 : 01FE 33CC  
INPUT#1 / OUTPUT#4 : 01FE 34CB  
INPUT#1 / OUTPUT#5 : 01FE 35CA  
INPUT#1 / OUTPUT#6 : 01FE 36C9  
INPUT#1 / OUTPUT#7 : 01FE 37C8  
INPUT#1 / OUTPUT#8 : 01FE 38C7  
INPUT#2 / OUTPUT#1 : 02FD 31CE  
INPUT#2 / OUTPUT#2 : 02FD 32CD  
INPUT#2 / OUTPUT#3 : 02FD 33CC  
INPUT#2 / OUTPUT#4 : 02FD 34CB  
INPUT#2 / OUTPUT#5 : 02FD 35CA  
INPUT#2 / OUTPUT#6 : 02FD 36C9  
INPUT#2 / OUTPUT#7 : 02FD 37C8  
INPUT#2 / OUTPUT#8 : 02FD 38C7  
INPUT#4 / OUTPUT#1 : 04FB 31CE  
INPUT#4 / OUTPUT#2 : 04FB 32CD  
INPUT#4 / OUTPUT#3 : 04FB 33CC  
INPUT#4 / OUTPUT#4 : 04FB 34CB  
INPUT#4 / OUTPUT#5 : 04FB 35CA  
INPUT#4 / OUTPUT#6 : 04FB 36C9  
INPUT#4 / OUTPUT#7 : 04FB 37C8  
INPUT#4 / OUTPUT#8 : 04FB 38C7  
INPUT#3 / OUTPUT#1 : 03FC 31CE  
INPUT#3 / OUTPUT#2 : 03FC 32CD  
INPUT#3 / OUTPUT#3 : 03FC 33CC  
INPUT#3 / OUTPUT#4 : 03FC 34CB  
INPUT#3 / OUTPUT#5 : 03FC 35CA  
INPUT#3 / OUTPUT#6 : 03FC 36C9  
INPUT#3 / OUTPUT#7 : 03FC 37C8  
INPUT#3 / OUTPUT#8 : 03FC 38C7

## 1.2. SWITCH POWER ON or OFF.

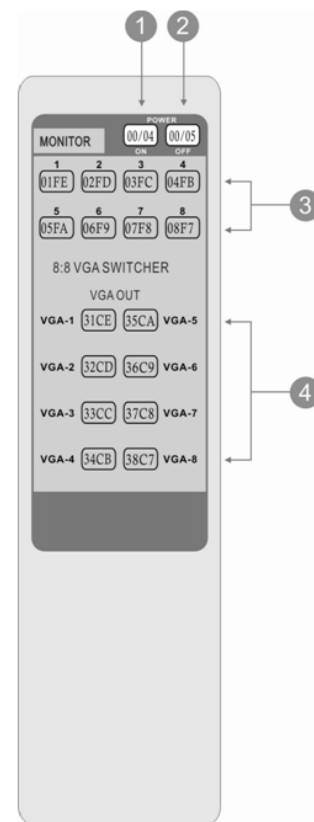
Controller with a separate power ON and OFF

## 3. INPUTS 1-8 : VGA DISPLAYS INPUT SELECTION

Input - 1 : CAT5 connect to VGA+Audio Display / Monitor  
Input - 2 : CAT5 connect to VGA+Audio Display / Monitor  
Input - 3 : CAT5 connect to VGA+Audio Display / Monitor  
Input - 4 : CAT5 connect to VGA+Audio Display / Monitor  
Input - 5 : CAT5 connect to VGA+Audio Display / Monitor  
Input - 6 : CAT5 connect to VGA+Audio Display / Monitor  
Input - 7 : CAT5 connect to VGA+Audio Display / Monitor  
Input - 8 : CAT5 connect to VGA+Audio Display / Monitor

## 4. OUTPUTS 1-8 : VGA SOURCES OUTPUT

Output -1 : VGA-1 VGA+Audio Signal from source device  
Output -2 : VGA-2 VGA+Audio Signal from source device  
Output -3 : VGA-3 VGA+Audio Signal from source device  
Output -4 : VGA-4 VGA+Audio Signal from source device  
Output -5 : VGA-5 VGA+Audio Signal from source device  
Output -6 : VGA-6 VGA+Audio Signal from source device  
Output -7 : VGA-7 VGA+Audio Signal from source device  
Output -8 : VGA-8 VGA+Audio Signal from source device



## RS-232 PROTOCOL COMMANDS

*Note: Turning the unit System Power Off over RS232 will distinguish the LED display leaving only the Power Switch LED on. The Video and Audio outputs will also mute. While the unit is turned off by RS232 it will continue to accept and act upon switching commands. For example, if the unit is in the off mode (via RS232) and you send a command to switch an input to an output, that route will complete and the video and audio will now appear on that channel only. The front panel LED for that particular output will also show the input selected (for that single output channel only). The remaining LED's will remain off and video and audio outputs muted. The unit will still return status and change messages in response to commands sent while in Power Off state. A hard reset command (SBALLRST) will return the unit to normal operation and also unlock the front panel.*

### 1. Power Off mode.

**SBSYSMOF** - Put system into Standby (Soft Power Off)

**SBSYSMON** - Bring unit out of Standby (Soft Power On)

Unit will respond with

**SBALOFK** - Unit is in Standby

**SBALONAK** - Unit is no longer in Standby

Example : Put Unit in Standby (Soft Power)

**SBSYSMOF** - Send

**SBALOFK** - Rcvd



## 2. FRONT PANEL LOCK

*Note : Hard resetting the unit will unlock the Front Panel controls.*

**SBSYSMLK** - When front panel is locked, changes can only be made by RS232

**SBSYSMUK** - Front Panel Unlock

Unit will respond with

**SBSYSLOK** - Front Panel has been Locked

**SBSYSULK** - Front Panel has been Unlocked

Example : Lock Front Panel Buttons

**SBSYSMLK**-Send

**SBSYSLOK**-Rcvd

## 3. UNIT RESET

**SBALLRST** - Reset every output to Input 1

Unit will respond with

**SBRSTACK** - Unit has reset each Output to Input 1

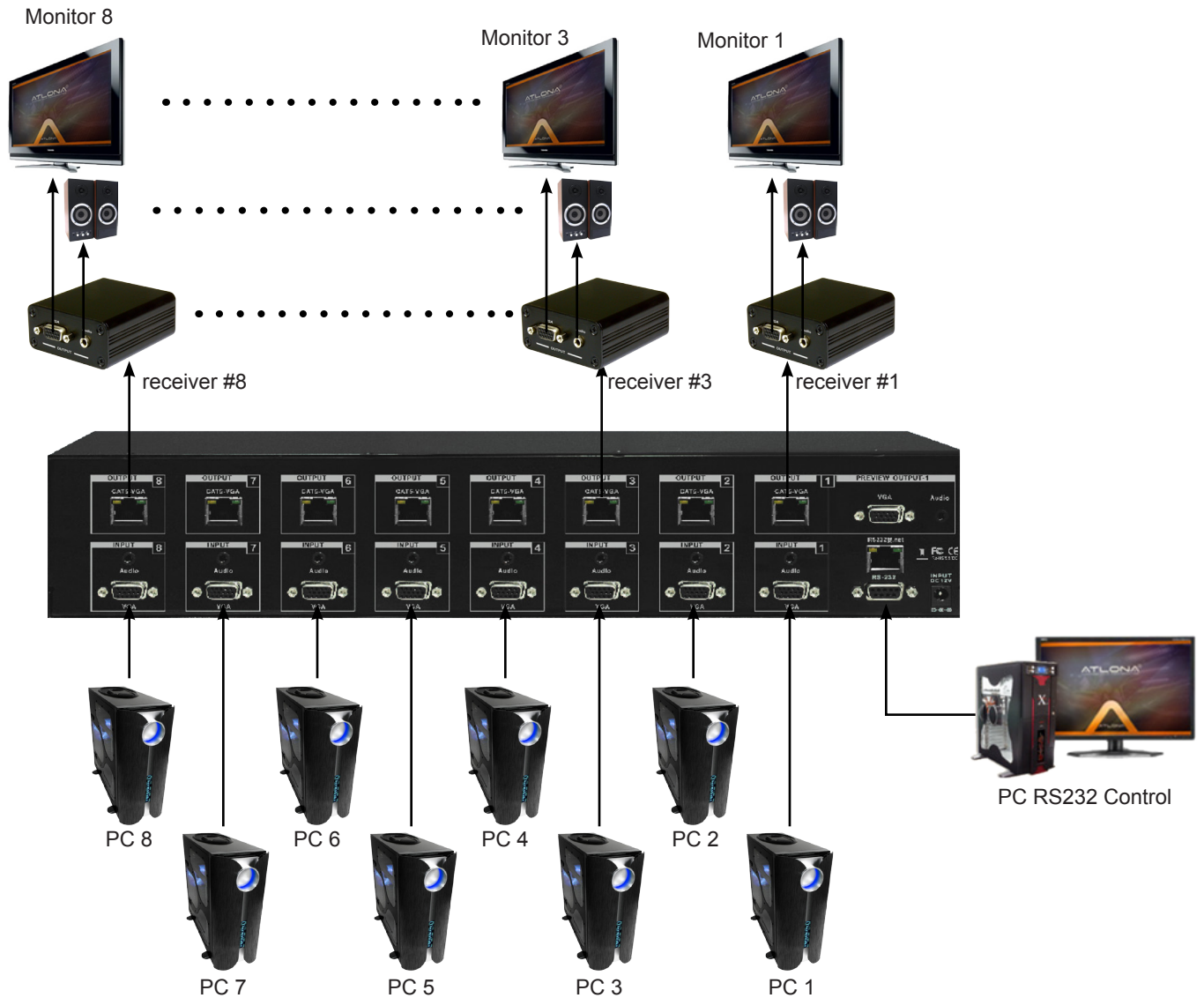
Example : Reset all outputs to Input 1

**SBALLRST** - Send

**SBRSTACK** - Rcvd

## CONNECTION DIAGRAM

### 8x VGA(RGBHV) sources to 8x CAT5 VGA-Audio Output Matrix Switcher



## INSTALLING

### CONTROL PORTS :

1. IR REMOTE - IR Remote Controller
2. RS 232 Interface - RS 232 interface system

### INPUTS 1 ~ 8 PORT VGA SOURCE SIGNALS :

VIDEO - VGA (RGBHV), connector with HD-15p

AUDIO - Stereo Audio (AR/AL), Connector via OD3.5mm Ear phone Jack

### OUTPUT 1 ~ 8 PORT CAT5 CONNECT TO DISPLAY MONITOR SIGNALS :

CAT5 - VGA (RGBHV) & Stereo Audio (AR/AL), Connector with CAT5 RJ-45

### Safeguards

To reduce the risk of electric shock, do not expose this product to rain or moisture.

If the wall plug does not fit into your local power socket, hire an electrician to replace your obsolete socket.

Do not modify the wall plug. Doing so will void the warranty and safety features.

This equipment should be installed near the socket outlet and the device should be easily accessible in case it requires disconnection.

### Precautions

FCC Regulations state that any unauthorized changes or modifications to this equipment not expressly approved by the manufacturer could void the user's authority to operate this equipment.

Operate this product using only the included external power supply. Use of other power supplies could impair performance, damage the product or cause fires.

In the event of an electrostatic discharge, this device may automatically turn off. If this occurs, unplug the device, and plug it back in.

Protect and route power cords so they will not be stepped on or pinched by anything placed on or against them. Be especially careful of plug-ins, or cord exit points from this product.

Avoid excessive humidity, sudden temperature changes or temperature extremes.

Keep this product away from wet locations such as bathtubs, sinks, laundries, wet basements and swimming pools.

Use only accessories recommended by ATLONA to avoid fire, shock or other hazards.

Unplug the product before cleaning. Use a damp cloth for cleaning. Do not use cleaning fluid or aerosols, which could enter the unit and cause damage, fire or electrical shock. Some substances may also mar the finish of the product.

Never open or remove unit panels or make any adjustments not described in this manual. Attempting to do so could expose you to dangerous electrical shock or other hazards. It may also cause damage to your AT-VGA88M-SR. Opening the product will void the warranty.

Do not attempt to service the unit. Instead disconnect it and contact your Authorized ATLONA reseller or contact ATLONA directly.

### 1. LIMITED WARRANTY

Atlona Technologies warrants that (a) its products (the "Product") will perform substantially in accordance with the accompanying written materials for a period of 3 YEARS from the date of receipt and (b) that the Product will be free from defects in materials and workmanship under normal use and service for a period of 3 years. In the event applicable law imposes any implied warranties, the implied warranty period is limited to 3 years from the date of receipt. Some jurisdictions do not allow such limitations on duration of an implied warranty, so the above limitation may not apply to Customer.

### 2. CUSTOMER REMEDIES

Atlona Technologies and its suppliers' entire liability and Customer's exclusive remedy shall be, at Atlona Technologies' option, either return of the price paid for the Product, or repair or replacement of the Product that does not meet this Limited Warranty and which is returned to Atlona Technologies with a copy of Customer's receipt. This Limited Warranty is void if failure of the Product has resulted from accident, abuse, or misapplication. Any replacement Product will be warranted for the remainder of the original warranty period or 3 year, whichever is longer.

### 3. NO OTHER WARRANTIES

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, ATLONA TECHNOLOGIES AND ITS SUPPLIERS DISCLAIM ALL OTHER WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WITH REGARD TO THE PRODUCT AND ANY RELATED WRITTEN MATERIALS. THIS LIMITED WARRANTY GIVES CUSTOMER SPECIFIC LEGAL RIGHTS. CUSTOMER MAY HAVE OTHER RIGHTS DEPENDING ON THE JURISDICTION.

### 4. NO LIABILITY FOR DAMAGES

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, IN NO EVENT SHALL ATLONA TECHNOLOGIES OR ITS SUPPLIERS BE LIABLE FOR ANY DAMAGES WHATSOEVER (INCLUDING WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR INDIRECT DAMAGES FOR PERSONAL INJURY, LOSS OF BUSINESS PROFITS, BUSINESS INTERRUPTION, LOSS OF BUSINESS INFORMATION, OR ANY OTHER PECUNIARY LOSS) ARISING OUT OF THE USE OF OR INABILITY TO USE THIS PRODUCT, EVEN IF ATLONA TECHNOLOGIES HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN ANY CASE, ATLONA TECHNOLOGIES' AND ITS SUPPLIERS' ENTIRE LIABILITY UNDER ANY PROVISION OF THIS AGREEMENT SHALL BE LIMITED TO THE AMOUNT ACTUALLY PAID BY YOU FOR THE PRODUCT. BECAUSE SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES, THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

ATLONA



Thank you for purchasing this Atlona product — we hope you'll enjoy it.



We also hope that you'll take a few moments to register your new purchase. Registration creates an ownership record if your product is lost or stolen and helps ensure you'll receive notification of performance issues and firmware updates.

At Atlona, we respect and protect your privacy and assure you that your registration information is completely secure. Of course, Atlona product registration is totally voluntary and failure to register will not diminish your limited warranty rights.